

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) An electric drive system, comprising:

a first engine tuned to have a minimum specific fuel consumption value within a first range of rotations per minute;

a second engine tuned to have a minimum specific fuel consumption value within a second range of rotations per minute, wherein the second range of rotations per minute is different than the first range;

a controller configured to operate the first engine within ~~[[a]]~~ the first range of rotations per minute and the second engine within ~~[[a]]~~ the second range of rotations per minute ~~wherein the first range of rotations per minute is different than the second range of rotations per minute;~~

a first electric generator adapted to be driven by the first engine and to generate a first output;

a second electric generator adapted to be driven by the second engine and to generate a second output;

an energy storage device adapted to receive the first output from the first electric generator and the second output from the second electric generator; and

an electric motor operatively connected to the energy storage device, the electric motor operable to generate mechanical power.

2. (Original) The system of claim 1, wherein the energy storage device is a battery.
3. (Original) The system of claim 1, wherein each of the first and second engines have a substantially similar torque output capacity.
4. (Cancelled)
5. (Previously presented) The system of claim 1, wherein the first engine has preferred operational characteristics within a first torque range and the second engine has preferred operational characteristics within a second torque range, and wherein the first torque range is greater than the second torque range.
6. (Original) The system of claim 1, wherein the first output of the first generator is greater than the second output of the second generator.
7. (Original) The system of claim 1, further including a heat exchanger operatively connected with the first engine and the second engine.
8. (Original) The system of claim 1, further including a transmission axle adapted to be driven by the electric motor.

9. (Previously presented) The system of claim 1, wherein the controller adjusts the operation of the first engine and the second engine based on current operating conditions.

10. (Currently amended) A method of operating an electric drive system, comprising:

applying a voltage from an electrical storage device to an electric motor;

operating a first engine within a first range of rotations per minute, within which the first engine has been tuned to have a minimum specific fuel consumption value, to drive a first generator to supply electrical power to the electrical storage device under a first set of operating conditions;

determining whether the first engine is operating outside of a predetermined set of operating parameters associated with the first range of rotations per minute; and

if the first engine is operating outside of the predetermined set of parameters, operating ~~[[the]]~~ a second engine within a second range of rotations per minute, within which the second engine has been tuned to have a minimum specific fuel consumption value, wherein the first range of rotations per minute is different than the second range of rotations per minute, to drive a second generator to supply electrical power to the electrical storage device under a second set of operating conditions.

11. (Original) The method of claim 10, further including operating the first engine and the second engine to drive both the first generator and the second

generator to supply power to the electrical storage device under a third set of operating conditions.

12. (Original) The method of claim 10, wherein the application of the voltage to the electric motor causes a rotation of an axle and a ground engaging device.

13. (Original) The method of claim 10, wherein the first engine and first generator are adapted to generate a first magnitude of electrical power and the second engine and second generator are adapted to generate a second magnitude of electrical power, the first magnitude being greater than the second magnitude.

14. (Currently amended) A method of assembling a drive system, comprising:

providing a first engine and a second engine, the first and second engines having substantially similar torque output capacities;

tuning the first engine to have preferred a minimum specific fuel consumption characteristics value within at a first range of engine speeds and engine torques;

connecting a first electrical generator to the first engine, the first electrical generator having preferred operational characteristics at within the first range of engine speeds and engine torques;

tuning the second engine to have ~~preferred~~ a minimum specific fuel consumption characteristics ~~at value within~~ a second range of engine speeds and engine torques, wherein the first range is different than the second range;

connecting a second electrical generator to the second engine, the second electrical generator having preferred operational characteristics ~~at~~ within the second range of engine speeds and engine torques;

operatively connecting a controller to the first engine and the second engine, the controller being configured to operate the first engine within the first range of engine speeds and engine torques and the second engine within the second range of engine speeds and engine torques;

connecting an electrical storage device to the first electrical generator and the second electrical generator; and

connecting the electrical storage device to an electric motor.

15. (Original) The method of claim 14, further including connecting the electric motor to a ground engaging device through a differential.

16. (Original) The method of claim 14, further including providing a controller adapted to control the operation of the first and second engines based on current operating conditions.

17. (Currently amended) A vehicle comprising:

a ground engaging device;

a first internal combustion engine tuned to have a minimum specific fuel consumption value within a first range of rotations per minute;

a second internal combustion engine tuned to have a minimum specific fuel consumption value within a second range of rotations per minute, wherein the second range of rotations per minute is different than the first range;

a controller configured to operate the first internal combustion engine within ~~[[a]]~~ the first range of rotations per minute and the second internal combustion engine within ~~[[a]]~~ the second range of rotations per minute ~~, wherein the first range of rotations per minute is different than the second range of rotations per minute;~~

a first electric generator adapted to be driven by the first engine and to generate a first output;

a second electric generator adapted to be driven by the second engine and to generate a second output;

an energy storage device adapted to receive the first output from the first electric generator and the second output from the second electric generator;

an electric motor operatively connected to the energy storage device, the electric motor operatively connected to the ground engaging device.

18. (Original) The vehicle of claim 17, wherein each of the first and second internal combustion engines have a substantially similar torque output capacity.

19. (Cancelled)

20. (Original) The vehicle of claim 17, wherein the first internal combustion engine has preferred operational characteristics within a first torque range and the second internal combustion engine has preferred operational characteristics within a second torque range, and wherein the first torque range is greater than the second torque range.

21. (Original) The vehicle of claim 17, wherein the first output of the first generator is greater than the second output of the second generator.

22. (Original) The vehicle of claim 17, further including a heat exchanger operatively connected with the first internal combustion engine and the second internal combustion engine.

23. (Original) The vehicle of claim 17, further including a transmission axle disposed between the electric motor and the ground engaging device.

24. (Previously presented) The vehicle of claim 17, wherein the controller adjusts the operation of the first internal combustion engine and the second internal combustion engine based on current operating conditions.

25. (Previously presented) The electric drive system of claim 1, wherein the second engine has a specific fuel consumption within the second range of rotations per minute that is lower than a specific fuel consumption of the first engine when the first engine operates outside of the first range of rotations per minute.

26. (Previously presented) The method of claim 10, wherein the second engine has a specific fuel consumption within the second range of rotations per minute that is lower than a specific fuel consumption of the first engine when the first engine operates outside of the first range of rotations per minute.

27. (Previously presented) The vehicle of claim 17, wherein the second internal combustion engine has a specific fuel consumption within the second range of rotations per minute that is lower than a specific fuel consumption of the first internal combustion engine when the first internal combustion engine operates outside of the first range of rotations per minute.